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Prior to further examination of the application, please undertake the following changes:

IN THE CLAIMS:

Cancel claims 1 to 19 without prejudice or disclaimer and substitute therefor the following:

20. (New) An information recording medium comprising:

a pair of electrodes;

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a liquid crystal material filled into a gap between said electrodes, the liquid crystal material comprising a rod-shape liquid crystal compound,

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said liquid crystal material having a property such that charge-transport properties are varied according to a phase transfer between a plurality of stable liquid crystal phases of the liquid crystal and/or a history of the phase transfer, the phase transfer of the liquid crystal material occurring upon a change in temperature of the liquid crystal material between a crystalline phase at a room temperature to an isotropic phase in a final state through a smectic phase at an elevated temperature,

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a thickness of the gap between the electrodes being larger than a domain size of the liquid crystal compound at least in the initial state of the liquid crystal material, and

Sub C1 cont'd

the thickness of the gap between the electrodes being smaller than a domain size of the liquid crystal compound in a cooled state from the isotropic phase in a final state.

21. (New) The information recording medium according to claim 20, wherein the information is recorded by applying thermal energy.

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22. (New) The information recording medium according to claim 20, wherein the information is read by measuring the value of a photoelectric current generated by light applied to an information recorded portion.

23. (New) The information recording medium according to claim 20, wherein at least one of the pair of electrodes is transparent to light.

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24. (New) The information recording medium according to claim 20, wherein a thermal head or a laser beam is used as means for applying thermal energy for information recording.

25. (New) The information recording medium according to claim 20, wherein the liquid crystal material is a phenylnaphthalene liquid crystal.

26. (New) The information recording medium according to claim 25, wherein the phenylnaphthalene liquid crystal is one selected from the group consisting of 2-(4'-octylphenyl)-6-dodecyloxynaphthalene, 2-(4'-octylphenyl)-6-butyloxynaphthalene, 2-(4'-octylphenyl)-6-nonyloxynaphthalene and a mixture thereof.

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27. (New) The information recording medium according to claim 20, wherein the liquid crystal material is a phenylbenzothiazole liquid crystal.

28. (New) The information recording medium according to claim 27, wherein the liquid crystal material is 2-(4'-heptyloxyphenyl)-6-dodecylthiobenzothiazole.

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29. (New) The information recording medium according to claim 20, wherein the liquid crystal material is 4-heptyloxy-4'-dodecylbiphenyl or 4-hexyloxy-4-butanoylbiphenyl.

30. (New) The information recording medium according to claim 20, wherein

the liquid crystal material comprises a liquid crystalline charge-transport material,

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a background for information recording is in a state that the charge-transport properties are inhibited attributable to polycrystalline structural defects in the initial state of the liquid crystal charge-transport material, and

information recording is carried out by phase transfer caused in the background upon the application of thermal energy.

31. (New) The information recording medium according to claim 20, wherein two or more charge-transport properties can be developed in a specific liquid crystal phase according the level of the thermal energy applied.

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32. (New) The information recording medium according to claim 20, wherein the pair of electrodes is provided on a substrate.

33. (New) The information recording medium according to claim 20, wherein the thickness between the pair of electrodes satisfies both requirements represented by inequalities (A) and (B):

(A) (Permeation depth at excitation light wavelength of liquid crystal material) < (Thickness between pair of electrodes)

(B) (Thickness between pair of electrodes) < (Thickness which can exhibit field strength such as to enable reading of photoelectric current).

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34. (New) A method for recording/reading information, comprising the steps of:

providing an information recording medium according to claim 20;

applying thermal energy according to information to be recorded to the medium to record the information; and

measuring the value of a photoelectric current generated by light applied to an information recorded portion.

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35. (New) The method for recording/reading information according to claim 34, wherein reading of information is carried out by measuring a resistance between the electrodes.

36. (New) The method for recording/reading information according to claim 34, wherein a thermal head or a laser beam is used as a means for applying thermal energy for information recording.

37. (New) A device comprising:

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a pair of electrodes;

a liquid crystal material filled into a gap between said electrodes, the liquid crystal material comprising a rod-shape liquid crystal compound,

said liquid crystal material having a property such that charge-transport properties are varied according to a phase transfer between a plurality of stable liquid crystal phases of the liquid crystal and/or a history of the phase transfer, the phase transfer of the liquid crystal material occurring upon a change in temperature of the liquid crystal material between a crystalline

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phase at a room temperature to an isotropic phase in a final state through a smectic phase at an elevated temperature, and

a thickness of the gap between the electrodes being smaller than a domain size of the liquid crystal compound in a cooled state from the isotropic phase in a final state.

38. (New) A method for producing a device comprising:

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providing a pair of electrodes and a liquid crystal material filled into a gap between said electrodes, the liquid crystal material comprising a rod-shape liquid crystal compound;

heating the liquid crystal material to change a crystalline phase at a room temperature to an isotropic phase in a final state through a smectic phase at an elevated temperature; and

cooling the thus heated liquid crystal material to a state that a domain size of the liquid crystal compound in a cooled state is bigger than a thickness of a gap between the electrodes.